IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re. Appln.:	R. Johannes Luyken, et al.
Serial No.:	10/600,750
Filed:	June 19, 2002
For:	CIRCUIT ELEMENT HAVING A FIRST LAYER COMPOSED OF AN ELECTRICALLY INSULATING SUBSTRATE MATERIAL, A METHOD FOR PRODUCING A CIRCUIT ELEMENT, BISPYRIDINIUM COMPOUNDS AND THEIR USE IN CIRCUIT ELEMENTS
Confirmation No.:	5993
Attorney:	Jeffrey R. Stone
Attorney Docket No.:	32226.65
Additional Fees:	Charge to Deposit Account 023732

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL COVER LETTER

Sir:

Enclosed for filing are the following:

1. Transmittal of Information Disclosure Statement Before First Office Action and Concise Statement of Relevance;
2. Information Disclosure Statement with twenty-five (25) cited references; and
3. Postcard receipt.

Respectfully submitted,

Dated: 12/30/03

By _____
Jeffrey R. Stone (Reg. No. 47,976)
BRIGGS AND MORGAN
2200 IDS Center
80 South Eighth Street
Minneapolis, MN 55402
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CERTIFICATE OF MAILING

I hereby certify that this document is being deposited with the United States Postal Service as First Class Mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

By Katy Sathre
Date December 30, 2003

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P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT BEFORE FIRST OFFICE ACTION AND CONCISE STATEMENT OF RELEVANCE

Applicant submits herewith the reference listed on the attached Information Disclosure Statement by Applicant.

This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits.

Authorization is hereby made to charge any additional fees required or credit any overpayment to Deposit Account No. 023732.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

By Katy Sathre
Dated December 30, 2003

CONCISE STATEMENT OF RELEVANCE

This Concise Statement of Relevance pertains to documents cited on the attached Supplemental Information Disclosure Statement by Applicant.

1. DE 101 32 640 A1 discloses a molecular electronics device and a method of manufacturing a molecular electronics device, the molecular electronics device allowing to couple molecular electronics molecules to electrodes.

2. DE 101 26 578A1 discloses a memory cell consisting of at least two different molecular or polymeric layers, respectively, forming an electrochemical red/ox-pair, discloses a memory array comprising such memory cells, and discloses a chip card comprising the memory array.

3. DE 100 23 765 A1 discloses an electrochrome device and electrochrome substances.

4. DE 198 01 638 A1 discloses electrochrome systems comprising electrochrome polymers, which are accessible by polymerization, polycondensation, and polyaddition, respectively, for use in devices for variable transmissibility of electromagnetic radiation.

5. DE 42 17 588 C2 discloses photosensitivity-devices of high stability, and discloses methods of producing the photosensitivity-devices.

6. Dehmlov, EV, Sleegers, A "Synthesen von hydroxylierten Bipyridinen, III: Synthese von unsymmetrischen und symmetrischen Dihydroxybipyridinen", Liebigs Ann. Chem. 9, S953-959, 1992 discloses synthesis of hydroxylated bipyridines, synthesis of unsymmetrically and symmetrically structured dihydroxybipyridines. Preparation and synthesis of fifteen symmetrical and asymmetrical dimethoxybipyridines and the pertinent diols is disclosed. Reductive cross coupling of halopyrodines with Ni (0) may result in complex mixtures. The same is true for an alternative reaction of (trimethylstannyl) pyridines with halopyridines in the presence of Pd(0). UV ^{1}H-, and ^{13}C- NMR spectra of the bipyridine derivates are tabulated.

Respectfully submitted,

Dated: 12/30/03

By _____
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PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 3

Complete if Known	
Application Number	10/600,750
Filing Date	June 19, 2003
First Named Inventor	R. Johannes Luyken
Group Art Unit	
Examiner Name	
Attorney Docket Number	32226.65

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No.[1]	Document Number Number - Kind Code[2] (*if known*)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	6,198,655	03-06-2001	Heath	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] (*if known*)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	1	DE 101 32 640	01-23-2003	Luyken		
	2	DE 101 26 578	12-12-2002	Leuschner		
	3	DE 100 23 765	11-22-2001	Horst		
	4	DE 198 01 638	07-22-1999	Claussen		
	5	DE 42 17 588	12-02-1993	Duerr		
	6	JP 56118002 (Abstract only)	09-16-1981	Fujimoto		
	7	JP 57014507 (Abstract only)	01-25-1982	Fujimoto		

Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 3

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Application Number	10/600,750
Filing Date	June 19, 2003
First Named Inventor	R. Johannes Luyken
Group Art Unit	
Examiner Name	
Attorney Docket Number	32226.65

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	1	C.P. COLLIER et al., Electronically configurable molecular-based logic gates, Science, Vol. 285, S. 391-394, 1999.	
	2	C.P. COLLIER et al., A [2] Catenane-based solid state electronically reconfigurable switch, Science, Vol. 289, pp. 1172-1175, 2000.	
	3	D.I. Gittins et al., A nonometre-scale electronic switch consisting of a metal cluster and redox-addressable groups, Nature, Vol. 408, pp. 67-69, 2000.	
	4	KAWASHIMA et al., The synthesis and properties of a methylviologen analogue, Tetrahedron Letters, Vol. 25, Nr. 25, pp. 1585-1586, 1984.	
	5	A.J. Blacker et al., Molecular Anión Binding and Substrate Photoxidation in Visible Light by 2, 7-Diazapyrenium Cations, Helvetica Chemica Acta, Vol. 70, pp. 1-12, 1987.	
	6	R. BAUER et al., Synthesis and electrochemical properties of some new bypuridinium and related compounds, Z. Naturforsch., B: Chem. Sci. 43(4), pp. 475-482, 1988.	
	7	J. MARCH, Advanced Organic Chemistry, 3. Auflage (Wiley, New York, 1985), p. 597ff.	
	8	P. STEHLE et al., Isotachophoresis of quarternary 4,4'-Bipyridylium Salts – Analytical control of synthesis and purification procedures, J. Chromatogr. 449(1), 299-3-5, 1988.	
	9	H.C. DELONG & D.A. BUTTRY, Ionic Interaktions play a major role in determining the electrochemical behavior of self-assembling viologen monolayers, Langmuir, 6, pp. 1319-1322, 1990.	
	10	X. TANG et al., A vibrational spektroskopic study of the structure or electroactive self-assembled monolayers ofviologen derivatives; Langmuir, 10, pp. 2235-2240, 1994	
	11	H.C. DELONG & Buttry, Environmental effects on redox potential of viologen groups in electroactive self-assembling viologen monolayers, Langmuir, 8, pp. 2491-2496, 1992.	

Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Examiner Name	
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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

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	12	D.I. GITTINS et al., Diode-like electron transfer across nanostructured films containing a redox ligand, J. Mater. Chem., vol. 10, pp. 79-83, 2000.	
	13	E.V. DEHMLOW & A. SLEEGERS, Synthesesn vol hyroxilierten Bipuridinen, III: Synthese vol unsymmetrischen und symmeterischen Dihydroxybipuridinen, Liebigs Ann. Chem. 9, pp. 953-959, 1992.	
	14	H. FISCHER & A.L. SUMMERS, Synthesis, polarography and hervicidal activity of quaternary salts of 2-(4-pyridyl)-1,3,5,5-triazines, 5-(4-pyridyl) pyrimidine, 2-(4-pyridyl) pyrimidine and related compounds, J. Heterocycl. Chem. 17(2), pp. 333-336, 1980.	
	15	E.W. GILL & A.W. BRACHER, The synthesis and characterization of some diazaphenanthrene derivatives, J. Heterocyclic Chem. 20, pp. 1107-1109, 1983.	
	16	D.W. TURNER et al., Molecular Photoelectron Spectroscopy, Wiley, Loneon, 1970.	
	17	A. Ulman, Formation and Structure of Self-Assembled Monolayers, Chem. Rev., Vol 96(4), 1533-1554 (1996).	

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